

THE 1997 HST

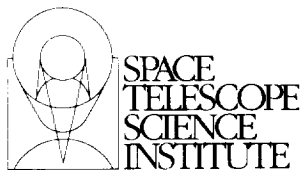
Calibration Workshop

With a New Generation of Instruments

**Held at the Space Telescope Science Institute
Baltimore, Maryland**

September 22-24, 1997

Edited by S. Casertano, R. Jedrzejewski, T. Keyes, M. Stevens



Cover design and artwork by John Godfrey, using a NICMOS Camera 2 parallel image taken for W. Brandner (Program 7412). The processed image is courtesy of C. J. Skinner and L. E. Bergeron.

On October 21, 1997, Chris Skinner passed away while visiting his parents in England. His sudden and untimely death was a great loss for astrophysics and especially for all his colleagues at STScI. Chris was a promising and brilliant scientist, whose recent research included dust around young stars, mass loss from evolved stars, and the origin of planetary nebulae. His paper on the Cygnus Egg Nebula, which appeared posthumously in *Astronomy and Astrophysics*, is a wonderful example of the depth and breadth of his scientific investigations.

Chris's contributions at STScI went beyond his research. He was one of the critical members of the NICMOS instrument team at STScI, and had followed the camera's progress throughout assembly and ground testing, highlighting some of the critical areas early on. He was involved in essentially all areas of the NICMOS calibration, and his work will make a huge difference in how well users will be able to take advantage of the camera's unique capabilities. He was well liked and respected for his exceptional technical skills, dedication, dry sense of humor, and ability to work effectively with other team members. His crucial role in the calibration of NICMOS can be seen in the Proceedings, in which he is involved in no less than six contributions.

This book is dedicated to the memory of Chris, as a modest tribute to his many contributions to the birth of infrared science on HST.



Christopher J. Skinner
1963-1997

The 1997 HST Calibration Workshop

with a new generation of instruments

**Proceedings of a Workshop held at the
Space Telescope Science Institute
Baltimore, Maryland**

September 22–24, 1997

Edited by Stefano Casertano, Robert Jedrzejewski, Charles D. (Tony) Keyes, and Mark Stevens

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Preface

The Second Servicing mission in early 1997 has brought major changes to the Hubble Space Telescope. Two of the original instruments, FOS and GHRS, were taken out, and replaced by completely new instruments, STIS and NICMOS. Two new types of detectors were installed, and for the first time, HST gained infrared capabilities. A new FGS was installed, with an alignment mechanism that could improve substantially both guiding and astrometric capabilities.

With all these changes come new challenges. The characterization of the new instruments has required a major effort, both by their respective Investigation Definition Teams and at the Space Telescope Science Institute. All necessary final calibrations for the retired spectrographs needed to be carried out, and their properties definitively characterized. At the same time, work has continued to improve our understanding of the two instruments that have remained on board.

The results of these activities were discussed in the 1997 HST Calibration Workshop, a three-day meeting held on September 22–24, 1997 at the Space Telescope Science Institute. About 150 astronomers took part in the Workshop, which featured over 30 invited talks and about 50 posters. The main focus of the Workshop was to provide users with the tools and the understanding they need to use HST's instruments and archival data to the best of their possibilities.

This book contains the written record of the Workshop, including both invited talks and poster papers. As such, it should provide a valuable tool to all interested in using existing HST data or in proposing for new observations. Of course, our knowledge and understanding of the HST instruments is continuously evolving (and so are the instruments themselves). In the era of electronic connectivity, obtaining up-to-date information can be as easy as a few mouse clicks, and prospective HST users are urged to obtain the latest information on HST status and calibration from the STScI web pages (at <http://www.stsci.edu>), or by sending electronic mail to help@stsci.edu. This book is also available electronically, at the URL <http://www.stsci.edu/meetings/cal97/proceedings.html>.

The Workshop was a great success, and we wish to thank all the participants for their enthusiasm and hard work that made it possible. We are grateful to all the members of the Organizing Committee for their help and support, and especially to Helmut Jenkner for stepping up whenever needed. We thank Knox Long, Helmut Jenkner, Ken Freeman, Ron Gilliland, John Graham, Don Lindler, and Chris Blades for chairing the sessions. The Workshop was sponsored by the Science Support Division of STScI, and enjoyed the support of many people at STScI, especially Jim Jones, Ron Meyers and Jeff Nesbitt. Harry Payne provided many of the latex formatting tools for this book, and the cover design is due to Trish Pengra and John Godfrey. Finally, very special thanks are due to Tawanta Nance and Cheryl Schmidt, who took good care of all administrative and practical details and ensured the smooth preparation and running of the Workshop.

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Part 1. STIS

